

REMARKS

Claims 1, 3-15, and 24-27 are now pending in the application. By this paper, Claim 1 has been amended. The basis for this amendment can be found throughout the specification, claims, and drawings originally filed. No new matter has been added. The preceding amendment and the following remarks are believed to be fully responsive to the outstanding Office Action and are believed to place the application in condition for allowance. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendment and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 3, 5 and 24-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 08313890 (Hidenori et al) in view of U.S. Patent No. 6,229,586 (Data et al), U.S. Patent No. 5,220, 444 (Mitsui et al.) and U.S. Patent No. 5,850,276 (Ochi et al).

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 08313890 (Hidenori et al) in view of U.S. Patent No. 6,229,586 (Data et al), U.S. Patent No. 5,220, 444 (Mitsui et al.) and U.S. Patent No. 5,850,276 (Ochi et al), as applied to claims 1, 3, 5 and 24-27 above, and further in view of U.S. Patent No. 6,315,801 (Miyazaki et al.)

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 08313890 (Hidenori et al) in view of U.S. Patent No. 6,229,586 (Data et al), U.S. Patent No. 5,220, 444 (Mitsui et al.) and U.S. Patent No. 5,850,276 (Ochi et al) as applied to

claims 1, 3, 5 and 24-27 above, and further in view of U.S. Patent No. 5,973,763 (Fujimura et al.)

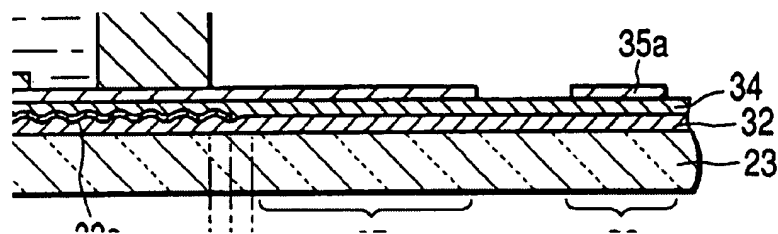
Claims 7-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 08313890 (Hidenori et al) in view of U.S. Patent No. 6,229,586 (Date et al), U.S. Patent No. 5,220, 444 (Mitsui et al.) and U.S. Patent No. 5,850,276 (Ochi et al) as applied to claims 1, 3, 5 and 24-27 above, and further in view of U.S. Patent No. 6,130,736 (Sasaki et al.).

These rejections are respectfully traversed.

The present invention calls for a substrate having a roughened region and a planar region having a metal film disposed on display areas of the liquid crystal device (planar and roughened regions). See Specification at pg. 19, Ins. 11-13 and pg. 21, Ins. 6-9. The metal layer acts as a reflecting film on the roughened region and is patterned on the planar region to form an alignment mark that is separated from the reflecting film. See Specification at pg. 21, Ins. 9-11, pg. 21, Ins. 15-17, and FIGS. 1E-1F. The reflecting film disposed in the roughened region improves scattering characteristics of the liquid crystal device. See Specification at pg. 31, Ins. 23-25 and pg. 32, Ins. 1-4.

Hidenori, Date, Hideo, Mitsui, and Ochi fail to teach such a relationship, either in combination or alone. The Examiner asserts that Date teaches an alignment mark formed in a planar region of a substrate and that it would have been obvious to modify a substrate structure of Hidenori with the teachings of Date in order to provide a substrate having an alignment mark formed in a planar region thereof. Applicants respectfully disagree.

Date fails to teach an alignment mark formed on a planar region of a substrate adjacent to a roughened region of the substrate. Date teaches a planar surface having an alignment mark, but fails to teach or suggest forming a planar surface with an alignment mark *adjacent to* a roughened region of the substrate. Date shows an alignment mark (35a) formed on an *opposite side* of a substrate (34) from a surface having depressions and projections. See Date at Col. 2, Ins. 57-63 and FIG. 2, reproduced in relevant part below. The alignment mark is not adjacent to the roughened region.



Applicants respectfully submit that there is no teaching, suggestion, or motivation to modify the substrate structure of Hidenori to include an alignment mark formed on a planar surface adjacent to a roughened region as Date teaches forming an alignment mark on a surface of a substrate opposite from a surface having a roughened region. Applicants therefore respectfully submit that the combination of Hidenori and Date fails to teach or suggest the claimed invention.

The Examiner asserts that Mitsui teaches covering a flattened region and an uneven region of a substrate with a metal such as aluminum that “functions as” an alignment mark. The Examiner states that an “alignment mark should be visible and using metal such as aluminum having higher reflectivity would enhance the visibility.”

See Office Action mailed August 23, 2005 at pg. 5. Applicants respectfully disagree with the Examiner that the metal layer of Mitsui "functions as" an alignment mark.

Mitsui teaches forming a reflection layer (14) on a glass substrate (11) to form a reflection plate. See Mitsui at Col. 3, Ins. 18-25 and FIG. 1d. The metal is deposited on the entire surface of the glass substrate to improve the scattering characteristics of the substrate and not for alignment. In fact, Applicants respectfully submit that the metal film of Mitsui cannot function as an alignment mark as the metal film of Mitsui covers an entire area of a glass substrate and is therefore not useful as an alignment mark.

In light of the foregoing, Applicants respectfully submit that the combination of Mitsui with Hidenori and Date fails to teach a roughened region having a metal film and a planar region having the same metal film for use as an alignment mark.

Because Date does not disclose an alignment mark formed on a planar region of a substrate adjacent to a roughened region of the substrate and Mitsui does not disclose a metal film formed in a planar region of a substrate for use as an alignment mark, and none of the cited references cures these deficiencies on Date and Mitsui, Applicants' invention is not taught or suggested by the prior art and reconsideration and withdrawal of the rejection is respectfully requested.

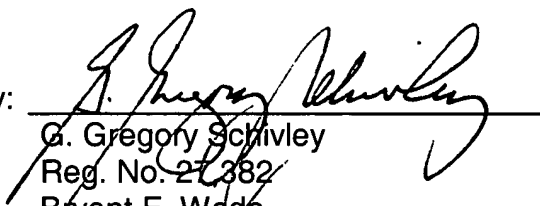
In this manner, it is believed that independent Claims 1, 25, and 27, as well as Claims 3-15, 24, and 26, respectively dependent therefrom, are in a condition for allowance in light of the art of record. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: Nov 22, 2005

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